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EXAMINER

ELPENORD, CANDAL

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,092

Applicant(s)

AUTERINEN, OTSO

Examiner

Candal Elpenord

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. §.133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>27 December 2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Abstract Objection

1. The abstract of the disclosure is objected to because improper legal phraseology "said". Correction is required. See MPEP § 608.01(b).
2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-17 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Haumont et al (US 7,023,825 B1)** in view of **Pelaez et al (US 7,167, 447 B2)**.

Regarding claim 1, Haumont et al. discloses a communications system (fig. 1 and fig. 4, recited in abstract, lines 1-11), comprising: at least one user equipment (fig. 1 and fig. 4, Mobile terminal, "mapping of external network QoS concepts", recited in column 16, lines 34-38); at least one resource node (fig. 6, SGSN, "routing PDUs between connected devices including MS", recited in column 17, lines 15-25), arranged to manage resource ("SGSN processes of packet delivery", recited in column 18, lines 36-41) for communication ("maintaining communication paths", recited in column 18, lines 49-53) with the at least one user equipment (fig. 1, Mobile terminal, "communications between MS and other network elements", recited in column 6, lines 61-67); at least one managing node ("GGSN managing flow profile associations", recited in column 8, lines 40-47) for managing traffic flow ("GGSN storing QoS values and processing request", recited in column 39-47) wherein the at least one resource node (fig. 1 and fig. 4, SGSN) and the at least one managing node (fig. 1 and fig. 4 GGSN) are arranged so that information ("RSVP signaling between edge devices", recited in column 9, lines 2-7 and fig. 4 for further illustration) is passed between at least one resource node (fig. 1 and fig. 4, SGSN) and at least one managing node (fig. 1 and fig. 4 GGSN), the at least one managing node (fig. 1 and fig. 4, GGSN) selecting (fig. 4, GGSN, "analysis of a packet to determine flow parameter", recited in column 8, lines 60-

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61) at least one parameter ("inserting a profile tag to incoming packet", recited in column 8, lines 60-64 and "plurality of parameters flow", recited in column 7, lines 58-61) for a new traffic flow ("delivery of a packet", recited in column 18, lines 53-59) based on the information ("scheduling and policing of packet on the basis of profile tag", recited in column 13, lines 8-18).

Regarding claim 2, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein the at least one resource node ("SGSN sending a request to GGSN", recited in column 17, lines 3-10) and at least one managing node ("GGSN response to the request", recited in column 17, lines 10-14) are arranged to negotiate ("parameters set as result of negotiated traffic", recited in column 9, lines 31-43) in order to select the at least one parameter ("involving parameters in negotiating and renegotiating", recited in column 9, lines 45-51).

Regarding claim 3, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein the information comprises negotiation information ("content of request comprising", recited in column 17, lines 6-8) and the negotiation information ("SGSN inserting network access point to GGSN address", recited in column 17, lines 15-21) is determined by at least one resource node ("GGSN receiving a negotiated QoS from SGSN", recited in column 32-38).

Regarding claim 4, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein the negotiation information ("negotiation parameter",

recited in column 8, lines 11-15) comprises at least one of the following: type of traffic (video on demand applications such as gaming, recited in column 8, lines 11-21), the bit rate (charging for peak bit rates", recited in column 11, lines 49-59) of the traffic and the cost ("charging users for the peak bit rates", recited in column 11, lines 56-59).

Regarding claim 5, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11) , wherein the negotiation information is determined for a plurality of different traffic handling classes ("subset of parameters and QoS class", recited in column 9, lines 44-52 and "handling of packets according to class", recited in column 10, lines 24-29).

Regarding claim 6, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein the parameter ("list of typical parameters", recited in column 7, lines 58-61) is at least one of the following: traffic handling class ("traffic policing according to reliability and delayed classes", recited in column 117, lines 63-67), cost ("charging based on QoS profile", recited in column 18, lines 64-67 and column 19, lines 1-3), and target bit rate (policing of negotiated attributes", recited in column 17, lines 59-65)

Regarding claim 8, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein at least one resource node (fig. 1, SGSN) comprises an access node (fig. 1, Border Gateway providing access between the user terminal and serving node"),with which the user equipment(fig. 1, Mobile station or terminal) is

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arranged to communicate ("mobile station scheduling of packet via an access point", recited in column 56-59).

Regarding claim 9, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein at least one access node ("fig. 1 Border gateway providing access") is a base station (fig. 1, "see BSC/RNC and BS", recited in column 2, lines 17-24) or radio network controller.

Regarding claim 10, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein the at least one managing node (Base Station in fig.1 or RNC or GGSN) is located at an edge of a network ("edge devices", recited in column 8, lines 59-61).

Regarding claim 11, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein the at least one managing node comprises an GGSN (fig. 4, see "GGSN", recited in column 8, lines 42-45).

Regarding claim 12, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein the resource node(fig. 1 and fig. 4, SGSN) is an access node (fig. 1, Inter-operator backbone 12 ("the SGSN provides access to another network" through device 12 in fig. 1 (see column 1 lines 40-55 for illustration) recited in column 12, lines 32-41).

Regarding claim 13, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein means are provided for guiding ("flow mapping by the edge device", recited in column 9, lines 31-32) an actual flow rate (Mobile station

mapping a packet flow profile", recited in claim 45-50) to a target flow rate ("policing of negotiated attributes", recited in column 17, lines 59-65).

Regarding claim 14, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein means ("signaling of RSVP path message for reservation request / flow information through RSVP", recited in column 19, lines 29-35) are provided for detecting a new flow ("new flow arrival", recited in column 9-10, lines 66-67 and lines 1-5).

Regarding claim 15, Haumont et al. discloses a system (fig. 1 and fig. 4, recited in abstract, lines 1-11), wherein means ("admission control processing load calculation", recited in column 10, lines 14-21) are provided for balancing load ("bit rates that can be guaranteed on basis of load", recited in column 10, lines 21-23) (between available resources ("load sharing among the network elements", recited in column 19, lines 49-57).

Regarding claim 17, Haumont et al. discloses a communications method ("quality of service for mobile communications", recited in column 7, lines 3-11) for use in a communications system (fig. 1 and fig. 4, recited in abstract, lines 1-11) comprising at least one user equipment (fig. 1 and fig. 4, Mobile terminal, "mapping of external network QoS concepts", recited in column 16, lines 34-38), at least one resource node (fig. 6, SGSN, "routing PDUs between connected devices including MS", recited in column 17, lines 15-25) arranged to manage resource ("SGSN processes of packet delivery", recited in column 18, lines 36-41) for communication ("maintaining

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communication paths", recited in column 18, lines 49-53) with the at least one user equipment (fig. 1 and fig. 4 TE/MS), at least one managing node ("GGSN managing flow profile associations", recited in column 8, lines 40-47) for managing traffic flow ("GGSN storing QoS values and processing request", recited in column 39-47), the method comprising the steps of passing information ("RSVP signaling between edge devices", recited in column 9, lines 2-7 and fig. 4 for further illustration) passed between at least one resource node and at least one managing node (fig. 4, GGSN, "analysis of a packet to determine flow parameter", recited in column 8, lines 60-61) selecting parameter ("inserting a profile tag to incoming packet", recited in column 8, lines 60-64 and "plurality of parameters flow", recited in column 7, lines 58-61) at least one parameter (fig. 3, "PDP/Pro" for possible selection of parameters) for a new traffic flow ("delivery of a packet", recited in column 18, lines 53-59) based on the information ("scheduling and policing of packet on the basis of profile tag", recited in column 13, lines 8-18).

Regarding claim 19, Haumont et al. discloses a managing node ("GGSN managing flow profile associations", recited in column 8, lines 40-47) for use in a communications system (fig. 1 and fig. 4, recited in abstract, lines 1-11) comprising at least one user equipment (fig. 1 and fig. 4, Mobile terminal, "mapping of external network QoS concepts", recited in column 16, lines 34-38), at least one resource node (fig. 6, SGSN, "routing PDUs between connected devices including MS", recited in column 17, lines 15-25) arranged to manage resource ("SGSN processes of packet delivery", recited in column 18, lines 36-41) for communication ("maintaining communication paths", recited in column 18, lines 49-53) with the at least one user equipment (fig. 1

and fig.4 TE/MS), and at least one managing node, the managing node comprising means for managing traffic flow ("GGSN managing flow profile associations", recited in column 8, lines 40-47), means("RSVP signaling between edge devices", recited in column 9, lines 2-7 and fig. 4 for further illustration) for receiving information from at least one resource node (fig. 1 and fig.4 TE/MS), and means (fig. 4, GGSN, "analysis of a packet to determine flow parameter", recited in column 8, lines 60-61) for selecting("inserting a profile tag to incoming packet", recited in column 8, lines 60-64 and "plurality of parameters flow", recited in column 7, lines 58-61) at least one parameter(fig. 3, "PDP/Pro" for possible selection of parameters) for a new traffic flow ("delivery of a packet", recited in column 18, lines 53-59) based on the information ("scheduling and policing of packet on the basis of profile tag", recited in column 13, lines 8-18).

6. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Haumont et al. in view of Pelaez et al. as applied to claim 1 above, and further in view of Parks et al (US 6,959,001 B1).

Haumont et al. teaches all the subject matter of the claimed invention with the exception of a system, wherein an access charge for the user equipment is dependent on the location of the user equipment in the system and/or time as recited in claim 7. However, Parks et al. in a similar field of endeavor teaches a system (fig. 1, end users 105, recited in column 2, lines 5-13) wherein an access charge ("rate or tariff charged", recited in column 1, lines 36-44) for the user equipment (fig. 1, end users 105, recited in

column 2, lines 5-13) is dependent on the location ("geographical distance", recited in column 2, lines 22-32) of the user equipment ("customer equipment and point of presence", recited in column 2, lines 18-22) in the system (fig. 1, end users 105, recited in column 2, lines 5-13) time ("charge based on time", recited in column 3, lines 15-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the modify the transporting QOS mapping information in a packet radio network of Haumont et al. by using features as taught by Parks et al. in order to provide..... (See Parks, column 1, lines 46-50).

7. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Haumont et al (US 7,023,825 B1) in view of Parks et al (US 6,959,001) as applied to claim 1 and further view of Guo et al (US 6,950,398 B2).

Haumont et al. teaches a system, wherein communication between the managing node (GGSN) and resource node (fig. 1, SGSN) is via a GPRS tunnelling protocol (GTP using labels to carry packets to real-time service" recited in column 18-25 (see column 2-4, lines 64-67 and lines 1-7 and column 7-8, lines 64-67 and lines 1-4) as recited in claim 13. Haumont teaches all the subject matter of the invention with the exception of multi-protocol label switching protocol as recited in claim 13. However, Guo et al. in a similar field of endeavor teaches the system (fig. 1 and 4, MPLS network and the transport network" recited in abstract, lines 1-8), wherein communication ("label switch path sets up by LSR", recited in column 3, lines 26-29 and "LSP connecting Base Station and Radio Network Controller", recited in column 40-44) between the managing

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node (fig. 1, Radio Network Controller, Network controller 106, "bandwidth management of label switched paths", recited in column 10, lines 24-29) and resource node (fig. 1, LSR at edge of network, (Label Switch Router performing "label swapping of incoming packet", recited in column 5, lines 3-12) is via multi-protocol label switching protocol ("encapsulating radio protocol frames in MPLS packets", recited in column 3, lines 29-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the control quality of service in a mobile communications system of Haumont et al. by using features as taught by Parks et al. and Guo et al. in order to provide..... (See Parks, column 1, lines 46-50), in order to provide..... (See Guo, column 10, lines 38-48 for second motivation).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claim 18** is rejected under 35 U.S.C. 102(e) as being anticipated by Guo et al (US 6,950,398 B2).

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Regarding claim 18, Guo et al. discloses a resource node (fig. 1, Label Switch Router 102, recited in column 4, lines 24-33) for use in a system (fig. 1, Transport network, "forwarding of data packet based on(LSP) Label Switched Path LSP", recited in column 3, lines 23-35) comprising: at least one user equipment (fig. 1, Base Station, 100, recited in column 36-39) ; at least one resource node (fig. 1, Label Switch Router, packets being routed on routing information maintained by LSRs", recited in column 4, lines 61-68 and column 5, lines 1-5) and at least one at least one managing node (fig. 1, Network controller 106, "bandwidth management of label switched paths", recited in column 10, lines 24-29) for managing traffic flow ("load of LSPs", recited in column 10, lines 30-34) the resource node (fig. 1, Label Switch Router) comprising means (Label Switch Router performing label swapping of incoming packet", recited in column 5, lines 3-12) or managing resource ("allocating bandwidth", recited in column 64-67 and column 8, lines 1-9) for communication (label switch path providing connection to network elements", recited in column 3, lines 40-31) with the at least one user equipment (fig. 1 Base Station 100), and means ("Label switched Router setting up path", recited in column 9, lines 41-50) for passing information to the at least one managing node (fig. 1 Radio Network Controller).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Weinstein et al (US 2002/0191572 A1), Palaez et al (US

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2003/0147373 A1), Patel et al (US 6,850,764 B1), and Puuskari et al (US 7,167,447 B2) are cited to show methods and systems that are related to claimed invention.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Candal Elpenord whose telephone number is (571) 270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

CE

